

## CLAIMS

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

1. A method of providing summaries of documents belonging to a class of a classified document collection comprising:
- inducing a set of rules from a sample set of documents, the set of rules being characteristic of the sample input documents;
  - comparing extracted words, phrases, terms (and the like) appearing in the set of rules induced from the sample set of documents to an individual incoming input document; and
  - providing a summary of the individual incoming input document based on matches between the extracted words, phrases, terms (and the like) and the individual incoming input document.
2. The method of claim 1, further comprising:
- providing more than one individual incoming input document; and
  - comparing the more than one individual incoming input document with the extracted words, phrases, terms (and the like) appearing in the set of rules induced from the sample set of documents in order to provide summaries of at least one of the more than one individual incoming input document.
3. The method of claim 2, wherein the more than one individual incoming input document is at least

3 two individual incoming input documents.

1 4. The method of claim 3, wherein:

2 the sample set of documents belong to one or  
3 more classes of a classified document collection;  
4 the at least two individual incoming input  
5 documents belong to the one or more classes of the  
6 classified document collection; and

7 the comparing step compares the at least two  
8 individual incoming input documents with the  
9 extracted words, phrases, terms and the like  
10 appearing in the set of rules in order to provide a  
11 summary for each of the at least two individual  
12 incoming input documents,

13 wherein the comparing step compares a same  
14 class of the at least two individual incoming input  
15 documents and the sample set of documents.

1 5. The method of claim 1, wherein:

2 the sample set of documents belong to one or  
3 more classes of a classified document collection;  
4 and

5 the individual incoming input document belongs  
6 to one of the one or more classes of the classified  
7 document collection.

1 6. The method of claim 5, wherein the comparing  
2 step compares a same class of the individual  
3 incoming input document and the sample set of  
4 documents in order to provide a summary for the  
5 individual incoming input document.

1 11. The method of claim 1, further comprising  
2 providing a means for obtaining the individual  
3 incoming input document after a summary of the  
4 individual incoming input document is provided.

1 14. The method of claim 1, further comprising  
2 training on the sample set of documents in order to  
3 induce the set of rules.

1 15. A method of providing summaries of documents  
2 belonging to a class of a classified document  
3 collection comprising:

4 inducing a set of rules from a sample set of  
5 documents belonging to one or more classes of a  
6 classified document collection, the induced set of  
7 rules being characteristic of the sample input  
8 documents;

9 extracting the set of rules in order to provide  
10 a concise description of the one or more classes of  
11 the sample documents;

12 comparing the extracted set of rules to at  
13 least one individual incoming input document  
14 belonging to a same class as the sample set of  
15 documents; and

16 providing a summary of each of the at least one  
17 individual incoming input document based on matches  
18 between the set of extracted rules and the  
19 individual incoming input document.

1 16. A means for providing summaries of documents  
2 belonging to a class of a classified document  
3 collection comprising:

4 means for inducing a set of rules from a sample  
5 set of documents, the induced set of rules being  
6 characteristic of the sample input documents;

7 means for comparing extracted words, phrases,  
8 terms and the like appearing in the set of rules

9 induced from the sample set of documents to at least  
10 one individual incoming input document; and  
11 means for providing a summary of each of the at  
12 least one individual incoming input document based  
13 on matches between a vocabulary of the set of rules  
14 induced from the sample set of documents and the at  
15 least one individual incoming input document.

1 17. The means of claim 16, wherein the inducing  
2 means further comprises means for extracting the set  
3 of rules in order to provide a concise description  
4 of one or more classes associated with the sample  
5 documents.

1 18. The means of claim 17, wherein:  
2 the comparing means compares the concise  
3 description of the extracted set of rules to the at  
4 least one individual incoming input document; and  
5 the summary of the individual incoming input  
6 document includes the word or term or phrase matches  
7 between the at least one individual incoming input  
8 document and the concise description of the  
9 extracted set of rules induced from the sample set  
10 of documents.

1 19. The means of claim 16, further comprising  
2 identifying means for identifying the summary as  
3 belonging to the at least one individual incoming  
4 input document wherein the identifying feature  
5 includes at least (i) a title of the document, (ii)  
6 a date of creation of the document, (iii) author's  
7 name and the like.

1 20. The means of claim 16, further comprising  
2 means for refining the individual incoming input  
3 document prior to the comparing step, wherein the  
4 refining includes at least (i) stemming, (ii)  
5 tokenization or (iii) morphological text processing  
6 and the like.

1 21. A computer program product comprising:  
2 a computer usable medium having computer  
3 readable program code embodied in the medium for  
4 query-object synthesis/modification, the computer  
5 program product having:  
6 first computer program code for inducing a set  
7 of rules from a sample set of documents, the sample  
8 set of documents belonging to at least one class of  
9 a classified document collection and the set of  
10 rules being characteristic of the sample input  
11 documents;  
12 second computer program code for extracting the  
13 set of rules in order to provide a concise  
14 description of one or more classes of the sample  
15 documents;  
16 third computer program code for comparing the  
17 extracted set of rules to at least one individual  
18 incoming input document; and  
19 fourth computer program code for providing a  
20 summary of each of the at least one individual  
21 incoming input document based on matches between the  
22 set of extracted rules and the individual incoming  
23 input document.